

In the Claims:

With claims 4, 6-9 and 25-37 pending, please cancel claims 7, 25-28 and 37 as indicated in the list of pending claims to follow.

1-3. (Cancelled)

4. (Previously Presented) A probe card assembly comprising a programmable controller to control the provision of test signals to test probes of the probe card for testing components on a wafer, wherein the programmable controller is connected through an interface to a test system controller, where the test system controller provides test signals to the interface to control testing of components on a wafer, wherein the interface comprises one or more of a group consisting of a parallel, wireless, network, RF and IR interface.

5. (Cancelled)

6. (Previously Presented) A probe card assembly comprising a programmable controller to control the provision of test signals to test probes of the probe card for testing components on a wafer, wherein the programmable controller comprises a serial to parallel converter configured to receive the test signals, the programmable controller configured to convert the test signals from serial to parallel and distribute the test signals in parallel to the test probes.

7. (Cancelled)

8. (Previously Presented) A probe card assembly comprising:

a programmable controller to control the provision of test signals to test probes of the probe card for testing components on a wafer; and

a serial to parallel converter connected to receive signals from the programmable controller, the serial to parallel converter being configured to convert the test signals from serial to parallel and distribute the test signals in parallel to the test probes.

9. (Previously Presented) The probe card assembly of claim 8, wherein the serial to parallel converter comprises a serial digital to analog converter connected to receive digital test signals from the programmable controller, the digital to analog converter configured to convert the serial signals to parallel and to provide the test signals to the test probes in analog form.

10-28. (Cancelled)

29. (Original) A probe card assembly comprising a serial interface device configured to connect to a test system controller to receive test signals for distributing to probes of the probe card assembly.

30. (Original) The probe card assembly of claim 29, further comprising:

a serial to parallel converter for converting the test signals from serial to parallel and distributing the test signals in parallel to a plurality of test probes.

31. (Original) The probe card assembly of claim 30, wherein the serial to parallel converter comprises a Field Programmable Gate Array (FPGA).

32. (Original) The probe card assembly of claim 31 comprising:

a space transformer supporting the test probes;

at least one daughter card; and

a base PCB electrically interconnected with the space transformer and the at least one daughter card, wherein the serial to parallel converter is provided on at least one of the space transformer, the base PCB, and the at least one daughter card.

33. (Previously Presented) A probe card assembly comprising:

a serial digital to analog converter configured to serially receive digital test signals that are to be distributed to test probes of the probe card in analog form, the digital to analog converter configured to convert the test signals to parallel and to provide the test signals to the test probes in analog form.

34. (Original) The probe card assembly of claim 33, further comprising:

an analog to digital converter configured to receive an analog signal from a test device and to send a digital representation to a test system controller.

35. (Original) The probe card assembly of claim 34 comprising:

a space transformer supporting the test probes;

at least one daughter card; and

a base PCB electrically interconnected with the space transformer and the at least one daughter card, wherein the serial digital to analog converter and the analog to digital converter are each provided on at least one of the space transformer, the base PCB, and the at least one daughter card.

36. (Previously Presented) A probe card assembly comprising a programmable controller to control the provision of test signals to test probes of the probe card for testing components on a wafer, wherein the programmable controller is connected through a wireless interface to a test system controller, where the test system controller provides test signals to the wireless interface to control testing of components on a wafer.

37. (Cancelled)